

Fig. 1

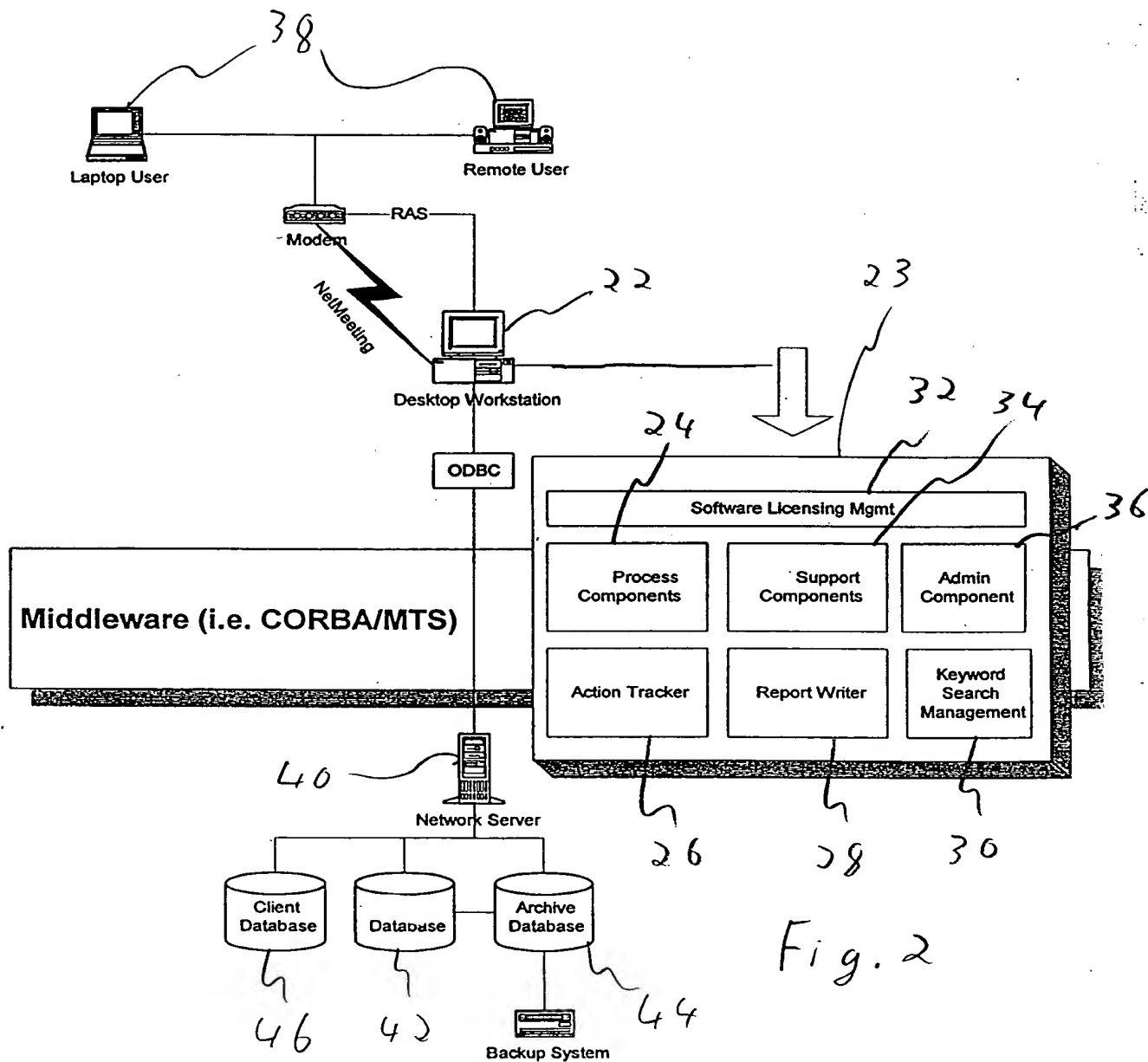
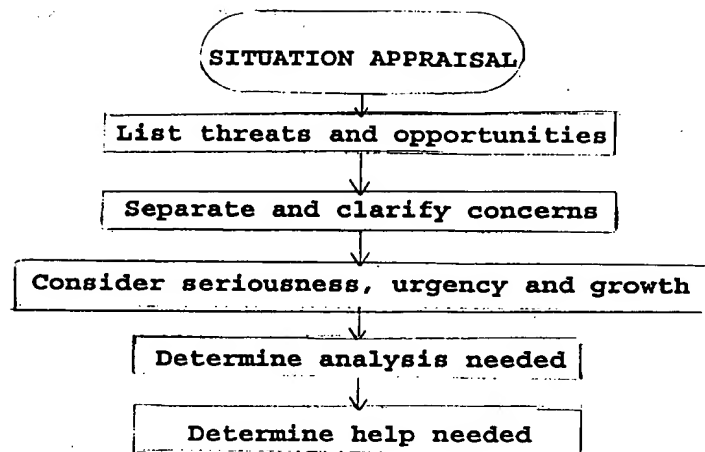
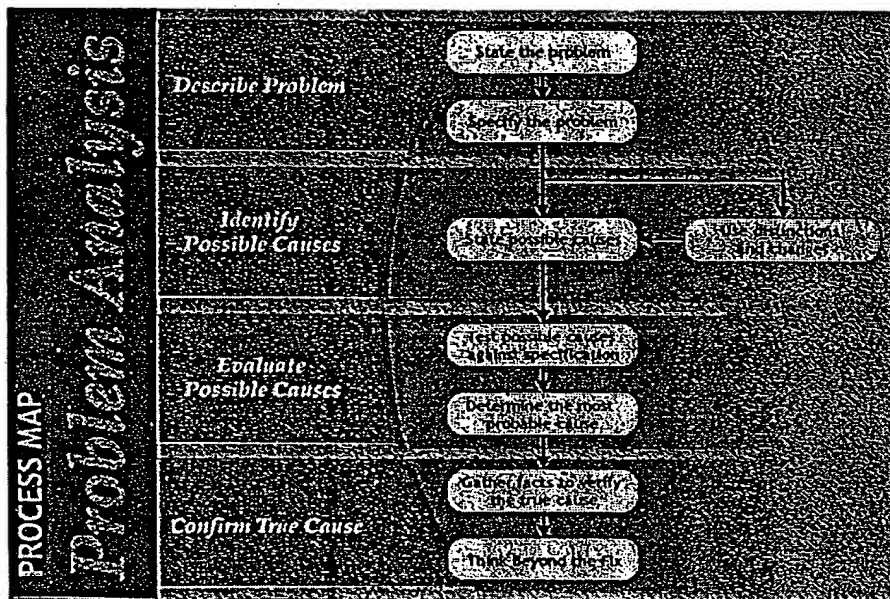


Fig. 2



50

Fig. 3



52

Fig. 4

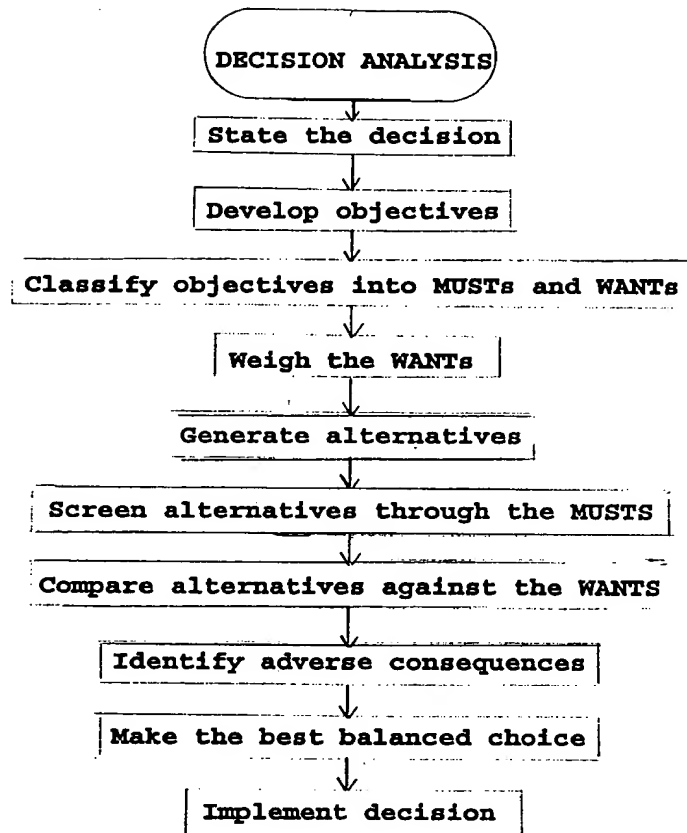


Fig. 5

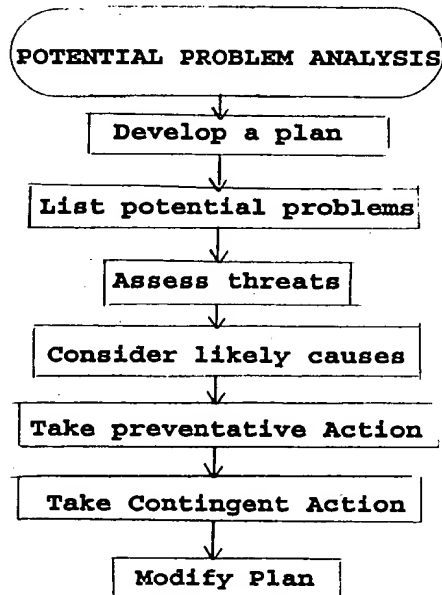


Fig. 6



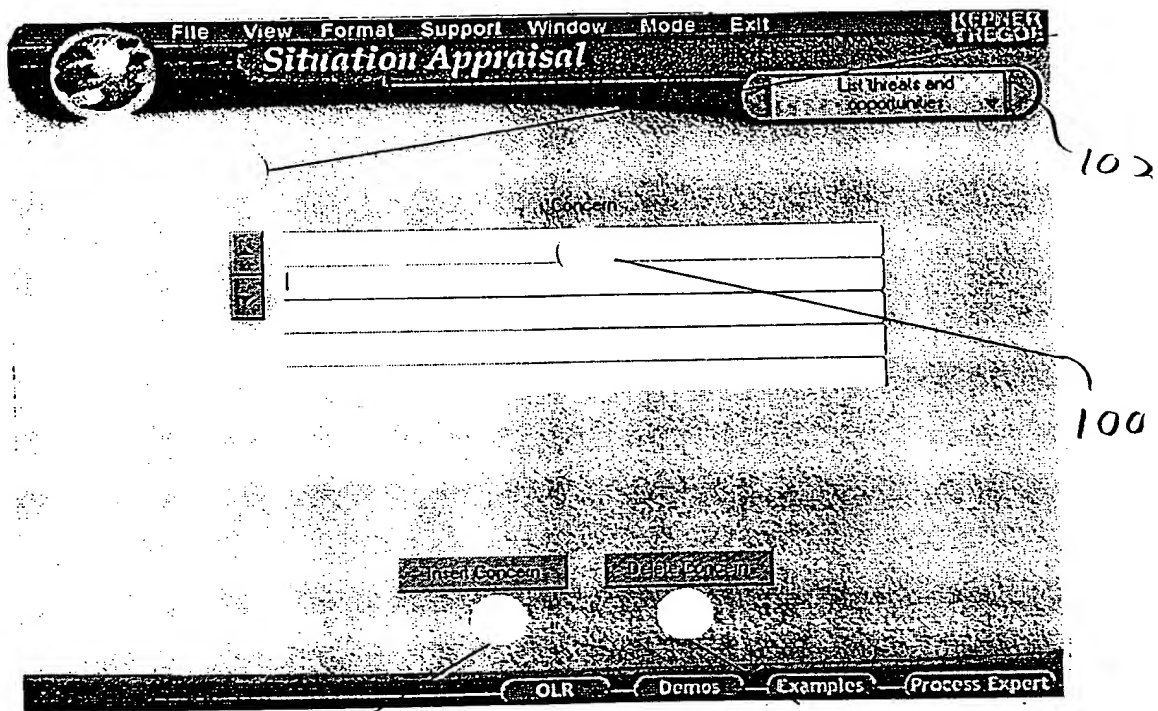
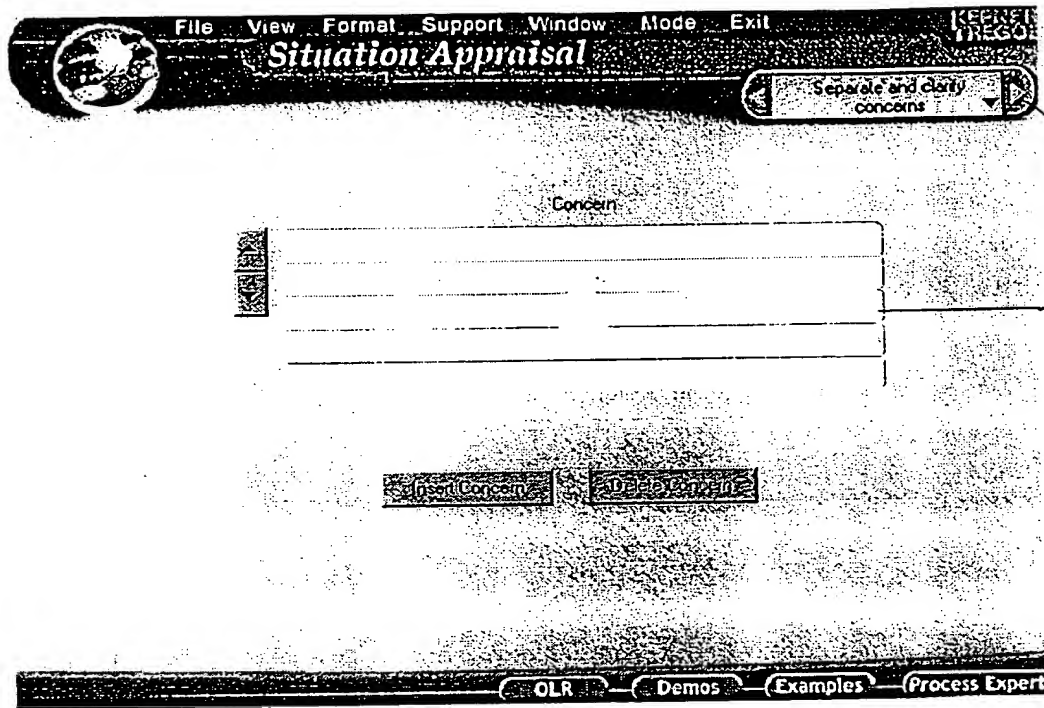


Fig. 7



File View Format Support Window Mode Exit

**Situation Appraisal**

Consider seriousness, urgency, and growth

104 112 106 108 110 102

Concerns	Priority	Seriousness	Urgency	Growth
	Medium	Medium <u>116</u> <u>126</u>	Low <u>118</u> <u>128</u>	Medium <u>120</u> <u>130</u>
	High	High	High	Medium
	Medium	High	Medium	Medium
	Low	Low	Medium	Low
	High	High	High	High

Low  
High  
Medium  
Low  
High

OLR Demos Examples Process Expert

Fig. 9

File View Format Support Window Mode Exit

**Situation Appraisal**

Determine analysis needed

140

Concerns	Priority	Seriousness	Urgency	Growth	Process
	Medium	High	Medium	Medium	Situation Analysis <u>142</u> <u>144</u>
	Med	Medium	Medium	High	Decision Analysis
	Low	Medium	Low	Low	Problem Analysis
	Medium	Low	Medium	High	Situation Analysis Problem Analysis Decision Analysis Situation Analysis Potential Problem Potential Opportunity
	High	High	High	High	

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146

Fig. 10

File View Format Support Window Mode Exit

# Situation Appraisal

Determine help needed

Concerns	Priority	Seriousness	Urgency	Growth	Process
	Medium	High	Medium	Medium	Problem Analysis
	Medium	Medium	Medium	High	Decision Analysis
	Low	Medium	Low	Low	Problem Analysis

154 Action 156 Who 158 When 160 Notes 162 Status 164

OLR Demos Examples Process Expert

Fig. 11

File View Format Support Window Mode Exit

**Problem Analysis**

What should be happening?

What is actually happening?

Is the cause known? ☐ Yes ☐ No

What tells you the cause is unknown?

What is the Object?

What is the Deviation?

OLR Demos Examples Process Expert

206

208

Fig. 12

File View Format Support Window Mode Exit

**Problem Analysis**

Object: \_\_\_\_\_ Deviation: \_\_\_\_\_

Problem: \_\_\_\_\_

What object?		
What deviation?		
Where geographically?		
Where on the object?		
When first?		
When since?		
When in the _____?		
How many objects?		
What is the size?		

Collapsed

OLR Demos Examples Process Expert

216

220

218

Fig. 13

003270-23220700

Fig. 15

File View Format Support Window Mode Exit

**Problem Analysis** KERNER TREGOE

Object Deviation

Problem:

What object?  Is  Is Not  Conduction  Assumptions or Notes

What deviation?   only if

Where geographically?   yes because

Where on the object?   only if

When first?   yes because

no because

Alter Assumption

OLR Demos Examples Process Expert

216

218

244

Fig. 16

File View Format Support Window Mode Exit

**Problem Analysis** KERNER TREGOE

Object Deviation

Problem:

Probably Possible Causes Assumptions

MPC

None  No assumptions necessary.

No assumptions necessary.

MPC High Medium Low

OLR Demos Examples Process Expert

236

247

246

242

Fig. 17



File View Format Support Window Mode Exit

**Problem Analysis**

Object: \_\_\_\_\_ Deviation: \_\_\_\_\_

Problem: \_\_\_\_\_

Possible Cause: \_\_\_\_\_

Assumptions: \_\_\_\_\_

236

246

248

250

252

256

Notes: \_\_\_\_\_ Action: \_\_\_\_\_ Who: \_\_\_\_\_ When: \_\_\_\_\_

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Fig. 18

File View Format Support Window Mode Exit

**Problem Analysis**

Object: \_\_\_\_\_ Deviation: \_\_\_\_\_

Problem: \_\_\_\_\_

Confirmed True Cause: \_\_\_\_\_

What other damage could this create? \_\_\_\_\_

260

Notes: \_\_\_\_\_ Action: \_\_\_\_\_ Who: \_\_\_\_\_ When: \_\_\_\_\_

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Fig. 19



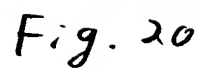


Fig. 20

File View Format Support Window Mode Exit

**Decision Analysis** KEPPNER TREGOE

Develop objectives

Decision Statement

Objective

Notes

Insert Objective

OLR Demos Examples Process Export

302

304

306

308

Fig. 21

File View Format Support Window Mode Exit

**Decision Analysis** KEPPNER TREGOE

Develop objectives

Decision Statement

Objective

Notes

Insert Objective

OLR Demos Examples Process Export

302

304

310

312

308

WANT
MUST
WANT
MUST
MUST
WANT
MUST

Fig. 22

File View Format Support Window Mode Exit

**Decision Analysis**

KEEPER THECCE

Decision Statement

WANT Objectives

WANT Objectives	Weight	Notes
314	5	
318	8	
	0	

Insert WANT Objective

OLR Demos Examples Process Expert

Fig. 23

File View Format Support Window Mode Exit

**Decision Analysis**

KEEPER THECCE

Decision Statement

Alternative

Alternative	Objective	Notes

Insert MUST Objective

Objective

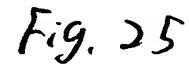
Objective	Weight	Notes
	5	

Insert Alternative

Insert WANT Objective

OLR Demos Examples Process Expert

Fig. 24



File View Format Support Window Mode Exit

**Decision Analysis**

KEPNER TREGOE

Decision Statement

WANT Objectives

5	340	2	346	0	6
8	344	6	0	0	6
3	6	0	0	0	4
TOTAL	Tentative Choice	76	Tentative Choice	0	90

OLR Demos Examples Process Expert

Fig. 26

File View Format Support Window Mode Exit

**Decision Analysis**

KEPNER TREGOE

Decision Statement

Alternative

II	Probability	Then	Seriousness	Notes
	MEDIUM		MEDIUM	
	LOW			
	MEDIUM			
	HIGH			

OLR Demos Examples Process Expert

Fig. 27





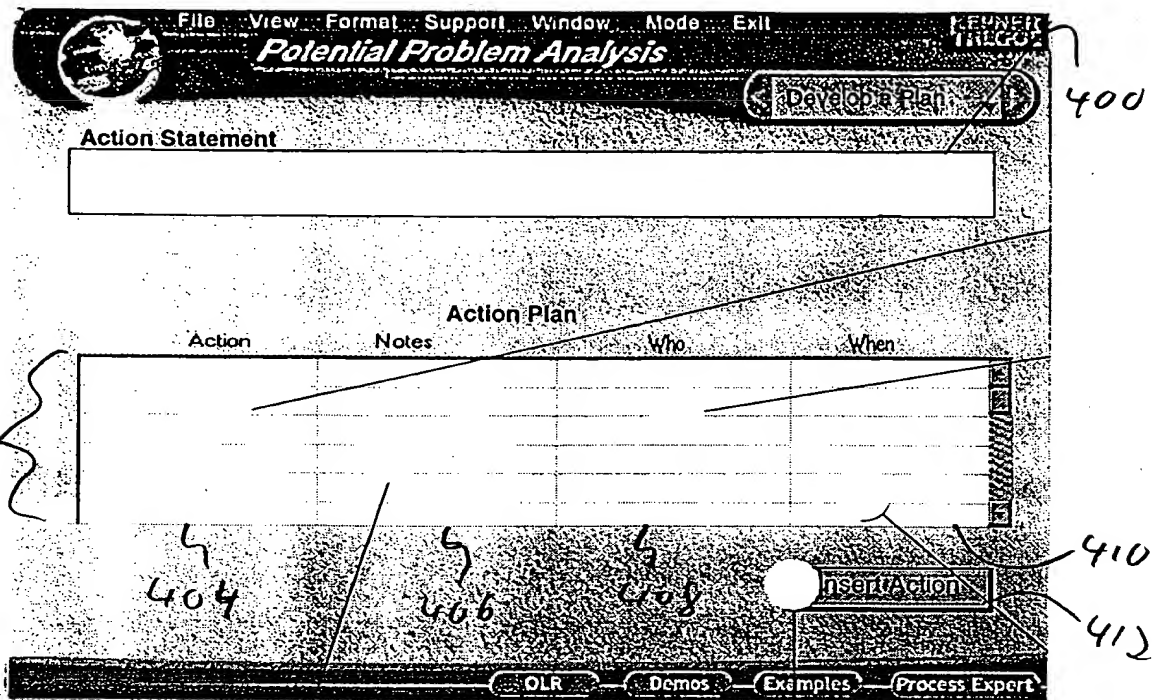


Fig. 30

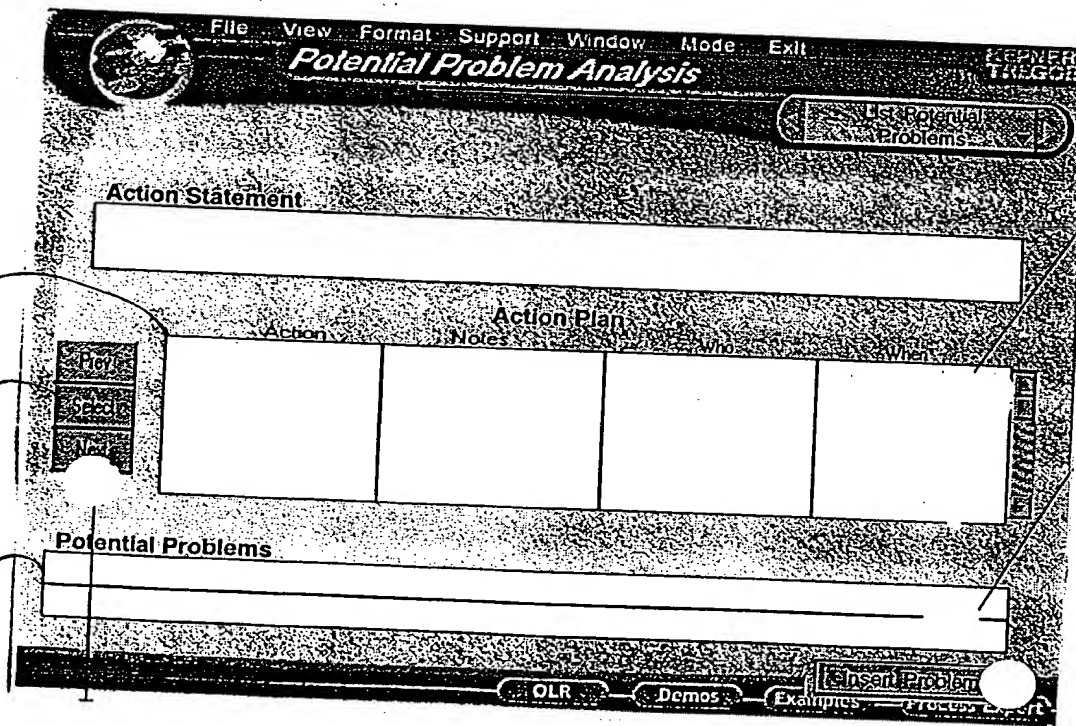


Fig. 31

File View Format Support Window Mode Exit

**Potential Problem Analysis**

Access Threats

Action Statement

403

404 Action

406 Action Plan

408 Who

410 When

414

416

422 Priority

416 Potential Problems

418 Probability

420 Seriousness

424

Consider Problem

OLR Demos Examples Process Expert

Priority	Potential Problem	Probability	Seriousness
High, Medium, Low		High, Medium, Low	High, Medium, Low
High, Medium, Low		High, Medium, Low	High, Medium, Low
High, Medium, Low		High, Medium, Low	High, Medium, Low

Fig. 32

File View Format Support Window Mode Exit

**Potential Problem Analysis**

Consider Likely Causes

Action Statement

403

404 Action

406 Action Plan

408 Who

410 When

414

422 Priority

406 Likely Causes

426 Potential Problem

428 Likely Cause

430 Probability

432

434

436

438

Consider Likely Cause

OLR Demos Examples Process Expert

Priority	Potential Problem	Likely Cause	Probability
High, Medium, Low			High, Medium, Low
High, Medium, Low			High, Medium, Low
High, Medium, Low			High, Medium, Low

Fig. 33



File View Format Support Window Mode Exit

**Potential Problem Analysis**

Taking Preventative Action

Action Statement

Action Plan

Action	Notes	Who	When

Preventative Actions

Priority	Potential Problem	Likely Cause	Preventative Action

Insert Likely Cause

Insert Preventative Action

OLR Demo Examples Process Expert

Fig. 34

File View Format Support Window Mode Exit

**Potential Problem Analysis**

Taking Contingent Actions

Action Statement

Action Plan

Action	Notes	Who	When

Contingent Actions

Priority	Potential Problem	Contingent Action	Trigger

Insert Contingent Action

Insert Trigger

OLR Demo Examples Process Expert

439 442

440 444 Fig. 35

446

Fig. 36

514

KTActionTracker

File View Format Support Window Mode

Sort By: Concern View By: All Refresh

Action Files	Priority	Concern	Seriousness	Urgency	Growth	Process
My Actions		Confirm true cause				
Red Sweal PA		PA on dropping revenues	508	510		
Department SA						
Tamworth PA						

Sort By: Who

Action	Who	When	Notes	Status
Perform chemical analysis on cleaning fluid		4-26-98	Fluid product #144458.b	
Check paint on new life vests		4-25-98		

Fig. 37







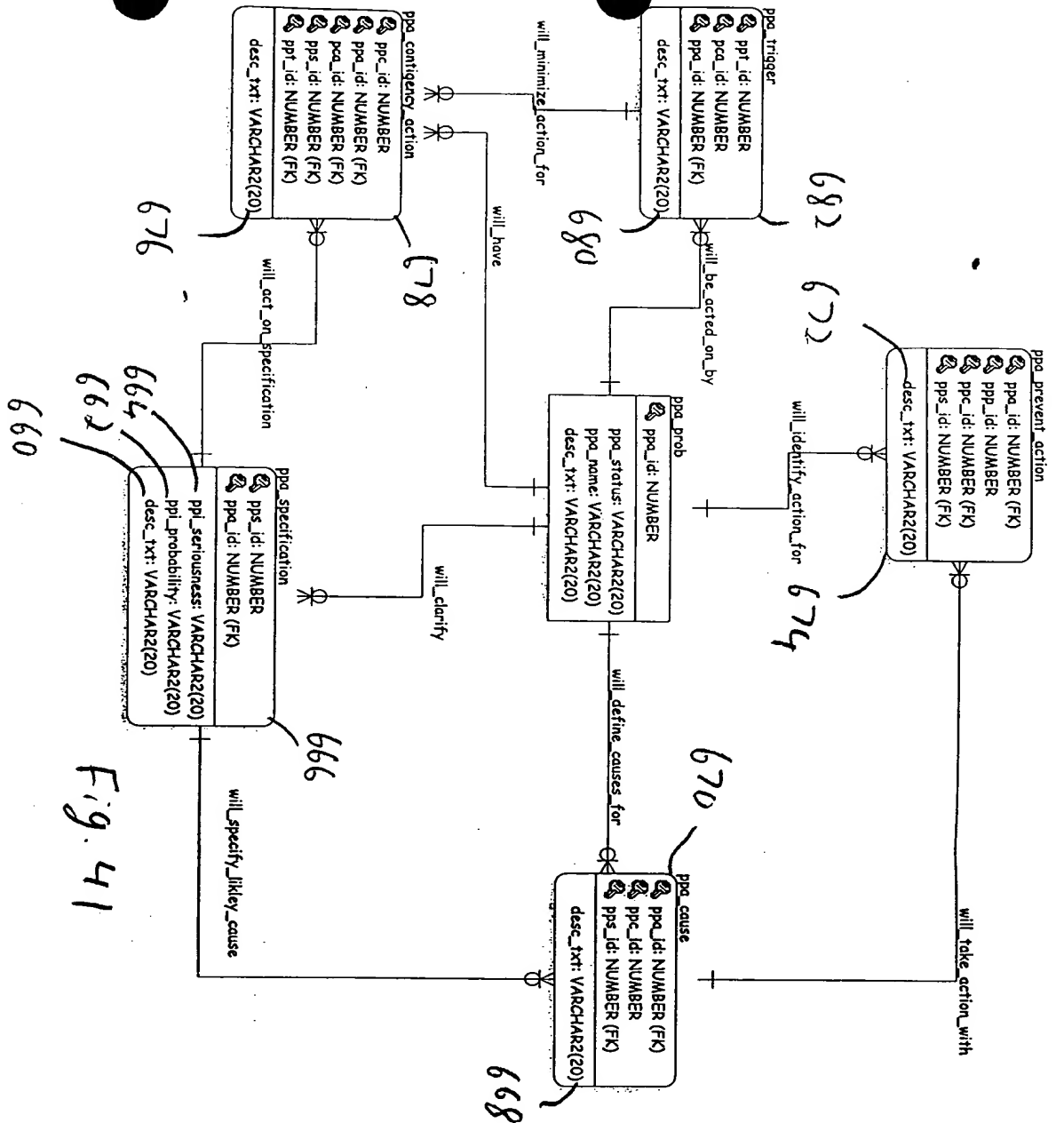
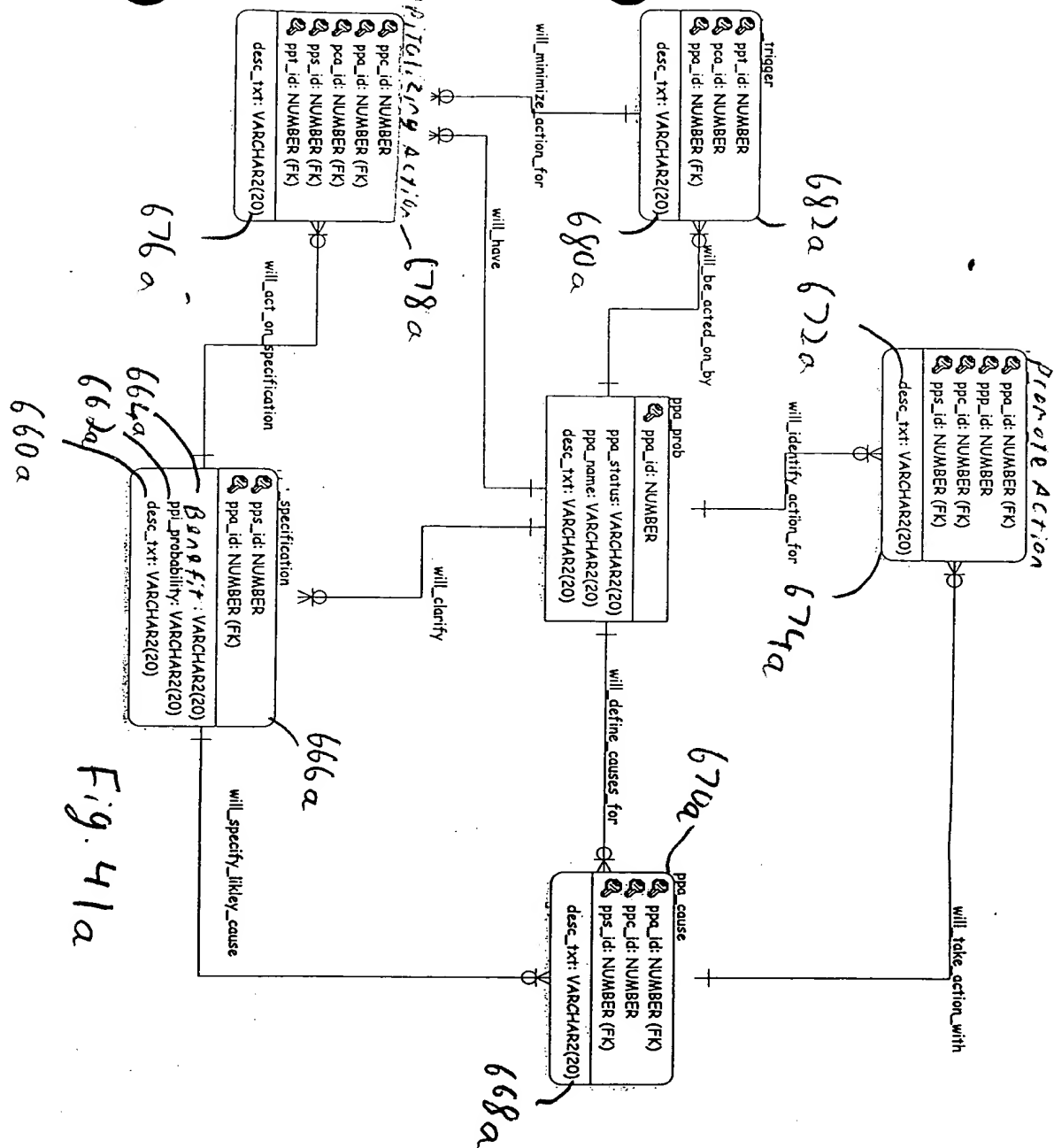


Fig. 41

00403783-012300





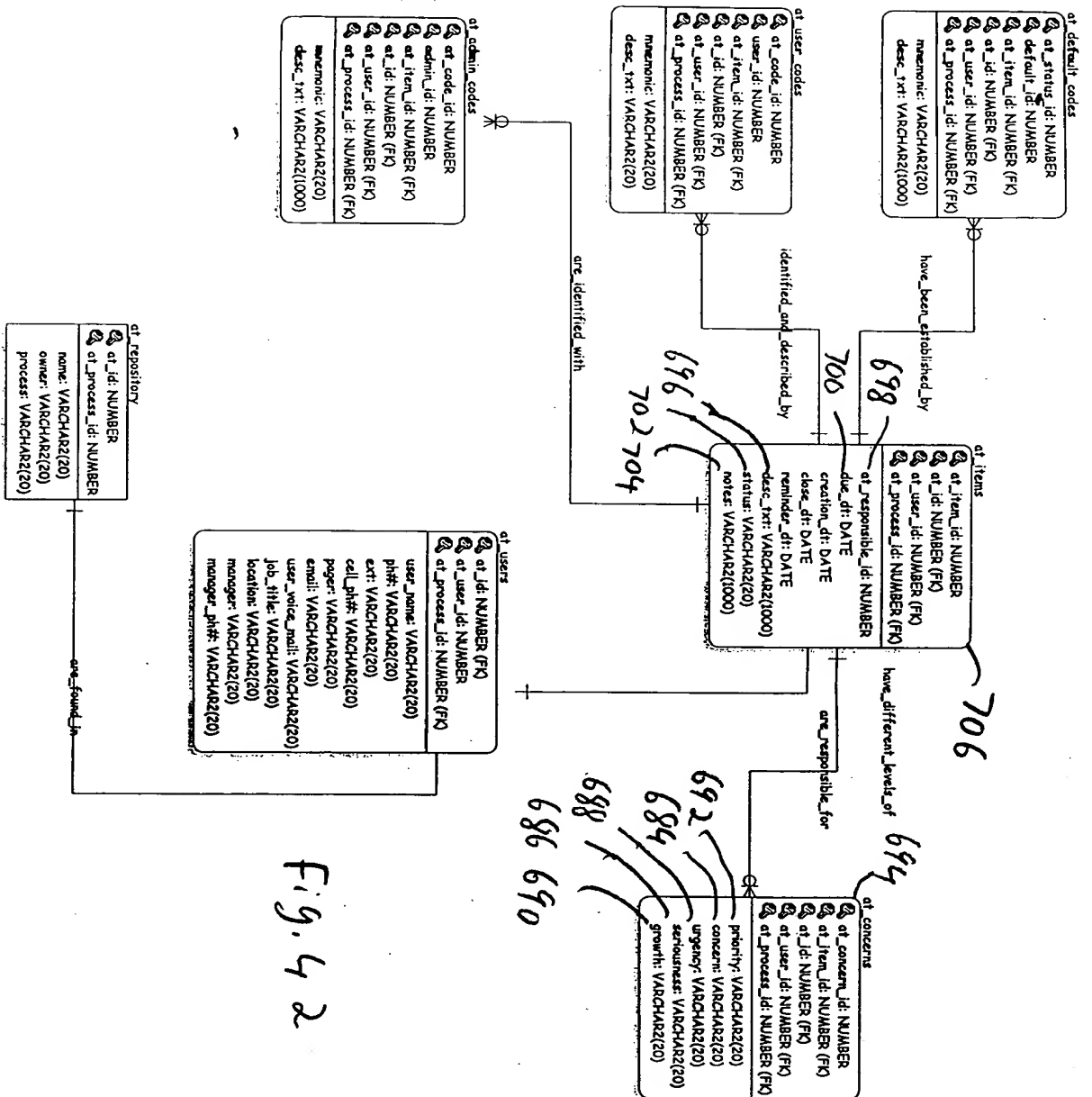


Fig. 4 2

00493783-042800

K-T Process Case
K-T Process Case Name
K-T Process Case Identification
K-T Process Case Statement
K-T Process Case Background
K-T Process Case Status
K-T Process Case Action Tracker Repository Identification
K-T Process Case Date-Time Stamp
K-T Process New()
K-T Process Open()
K-T Process Save()
K-T Process Save As()
K-T Process Edit()
K-T Process Delete()
K-T Process Close()
K-T Process Set Status()
K-T Process Get Status()
K-T Process Write K-T Process Statement()
K-T Process Read K-T Process Statement()
K-T Process Set K-T Process Statement()
K-T Process Get K-T Process Statement()
K-T Process Write K-T Process Background()
K-T Process Read K-T Process Background()
K-T Process Set K-T Process Background()
K-T Process Get K-T Process Background()

800

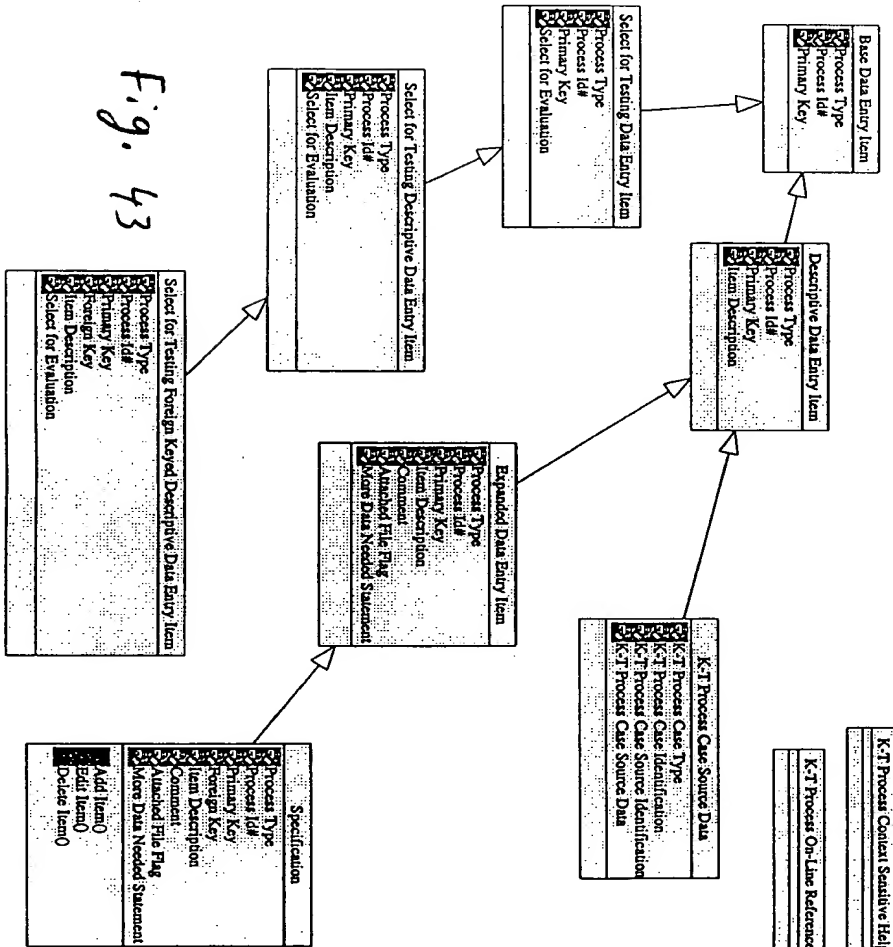


Fig. 43

K-T Process In-Process Action Repository
K-T Process Case Type
K-T Process Case Identification
K-T Process Case Action Item Responsible Person or Group
K-T Process Case Action Item Due Date
K-T Process Case Action Item Identification Number
K-T Process Case Action Item Status
K-T Process Case Action Item AT Export Status

This probably is redundant now

Priority
Item Priority Description
Item Foreign Key

K-T Process Content Sensitive Help
K-T Process On-Line Reference

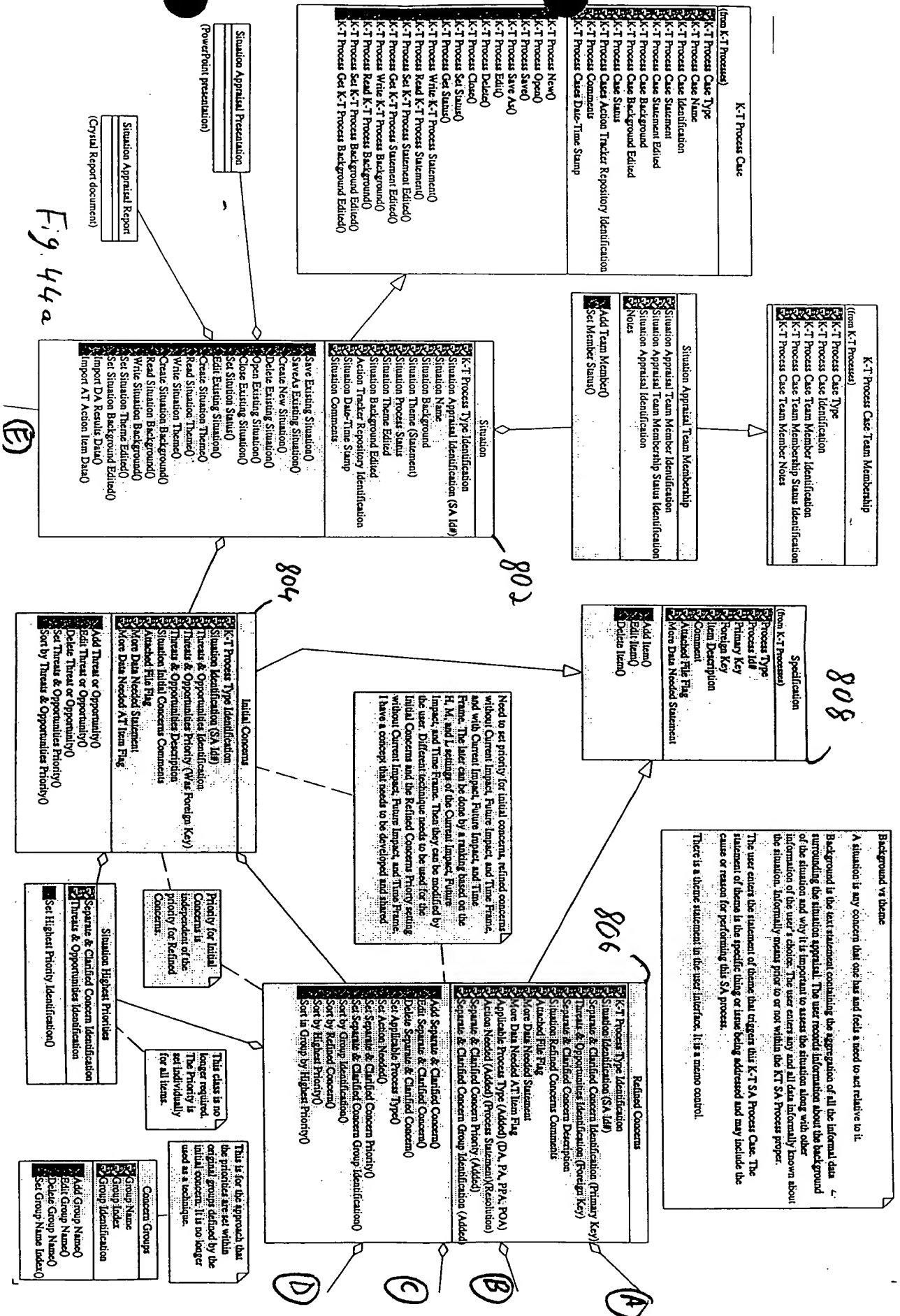
K-T Process Case Source Data
K-T Process Case Type
K-T Process Case Identification
K-T Process Case Source Identification
K-T Process Case Source Data

K-T Process Actions
Process Identification
Actions Object Identification
Actions Item Identification Number
Actions Item Text
Actions Item Responsible Person or Group
Actions Item Due/Done Date
Add Action Item()
Edit Action Item()
Delete Action Item()

K-T Process In-Process Actions
Process Identification
In-Process Actions Object Identification
In-Process Action Item Identification Number
In-Process Action Item Text
In-Process Action Item Responsible Person or Group
In-Process Action Item Due Date
In-Process Action Item Status
In-Process Action Item AT Export Status
Add In-Process Action Item()
Edit In-Process Action Item()
Delete In-Process Action Item()
Set In-Process Action Item Status()
Set In-Process Action Item AT Export Status()

Specification
Process Type
Process Id#
Primary Key
Foreign Key
Item Description
Comment
Attached File Flag
More Data Needed Statement
Add Item()
Edit Item()
Delete Item()

K-T Process Status Code
K-T Process Type Identification
K-T Process Status Code Identification
K-T Process Status Code Mechanism
K-T Process Status Code Description
K-T Process Status Code Manager Identification
K-T Process Status Code K-T Process Identification
Add Status Code()
Edit Status Code()
Delete Status Code()



[illegible]

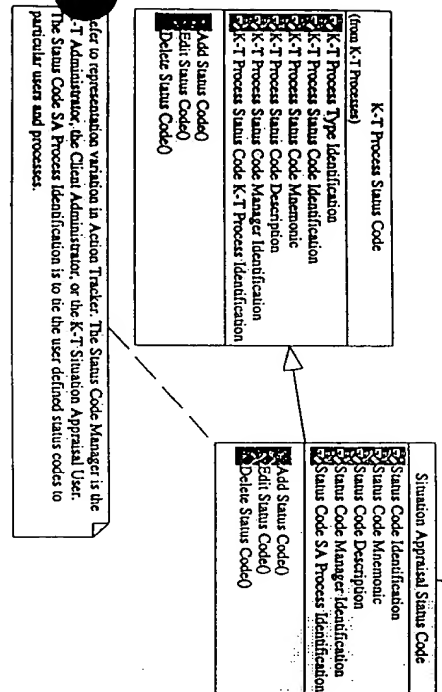


Fig. 44c

(E)

Establish priority:

Select a concern that seems to be the highest priority.  
Select another and place it above or below the first concern in priority.  
Select a third and place it relative to the first two concerns. Use drag and drop graphically.  
Select additional concerns sequentially and place as above.  
Select those that represent the group classified as High Priority and designate as such.  
Select from the remainder those that represent the group classified as Medium Priority and designate as such.  
The remainder are classified as Low Priority and are designated as such.

Karl.

As a follow up to our discussion, I want to confirm that we do need some type of ordering control in the SA grid on the initial "list concerns" screen. We may also want to allow this on the "separate and clarify" grid. However, in this case, the user could still only order the parent cells (with the children following the parent). They could not order children cells individually.

I can see where this functionality could be useful any time we have a single-column grid, such as in DA (list Objectives and List Alternatives) and PPA/POA (list Potential Problems/Opportunities).

Nicki

004403783-012800



④  
⑤

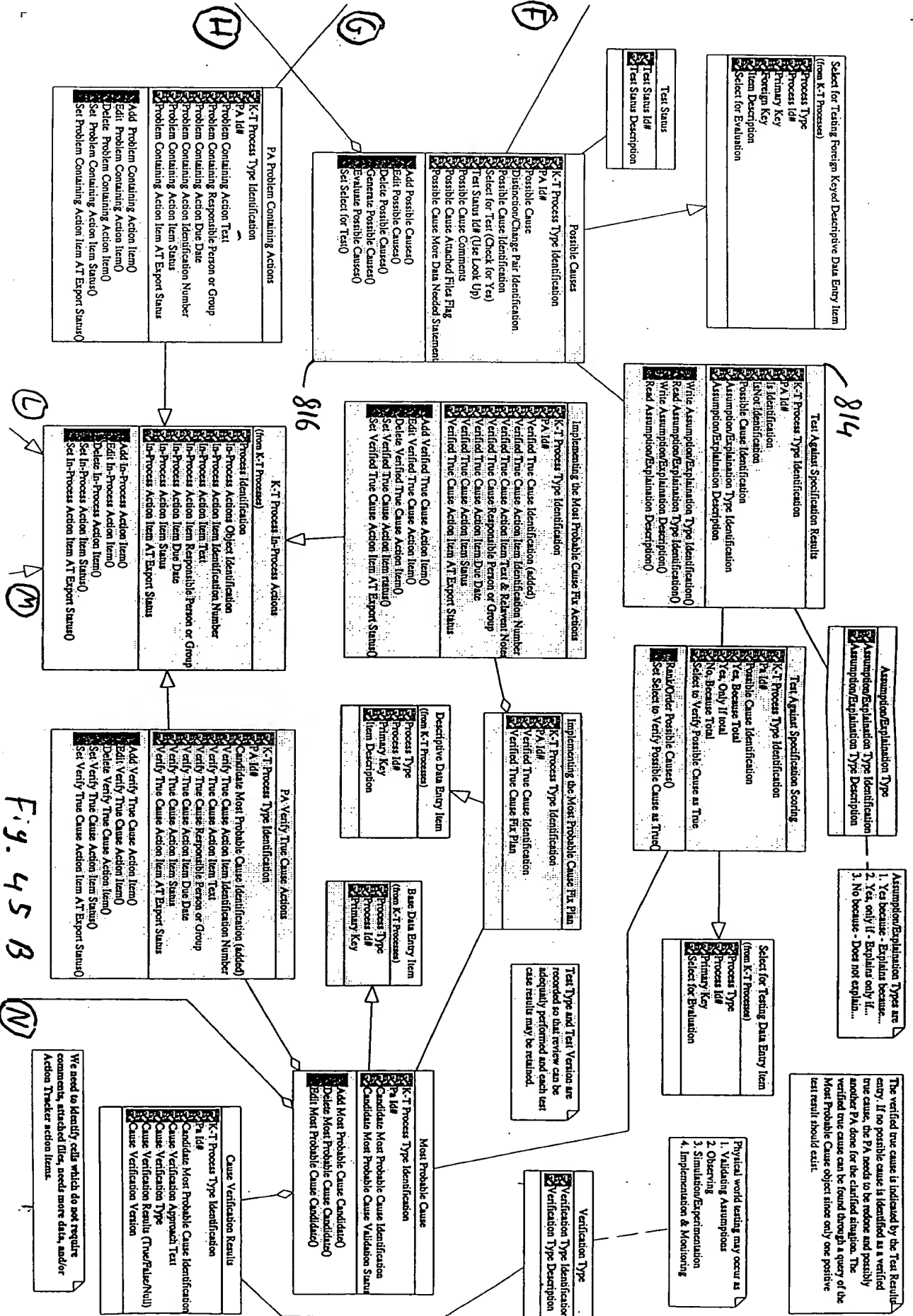


Fig. 45 B





Fig. 45 d

We need to identify cells which do not require comments, attached files, needs more data, and/or Action Tracker action items.

Extend the Fix Actions	
K-T Process Type Identification	
Pa Id#	
Verified True Cause Identification (added)	
Extend the Fix Action Item Identification Number	
Extend the Fix Action Item Text	
Extend the Fix Action Item Responsible Person or Group	
Extend the Fix Action Item Due Date	
Extend the Fix Action Item Status	
Extend the Fix Action Item AT Export Status	
Add Extend the Fix Action Item()	
Edit Extend the Fix Action Item()	
Delete Extend the Fix Action Item()	
Set Extend the Fix Action Item AT Export Status()	

Extend the Cause Actions	
K-T Process Type Identification	
Pa Id#	
Verified True Cause Identification (added)	
Extend the Cause Action Item Identification Number	
Extend the Cause Action Item Text	
Extend the Cause Action Item Responsible Person or Group	
Extend the Cause Action Item Due Date	
Extend the Cause Action Item Status	
Extend the Cause Action Item AT Export Status	
Add Extend the Cause Action Item()	
Edit Extend the Cause Action Item()	
Delete Extend the Cause Action Item()	
Set Extend the Cause Action Item AT Export Status()	

Think Beyond the Fix is used to assure the true cause is identified, the same problem will not recur, and all damage is corrected.

Base Data Entry Item (from K-T Process)
Process Type
Process Id#
Primary Key

Extend the cause answer:  
 a. What other damage has the cause done?  
 b. Where else could this cause create trouble?  
 c. What caused the cause?  
 d. Are you 100% sure? (If not, start a new PA.)  
 e. Extend the fix answer:  
 a. Are there identical or similar things that need the same fix?  
 b. What problems could this fix cause?

Where Else Response	
Process Type	
Pa Id#	
Where Else Response Id#	
Verified True Cause Identification	
Where Else Response Text	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

Additional Damage Response	
Process Type	
Pa Id#	
Additional Damage Response Id#	
Verified True Cause Identification	
Additional Damage Response Text	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

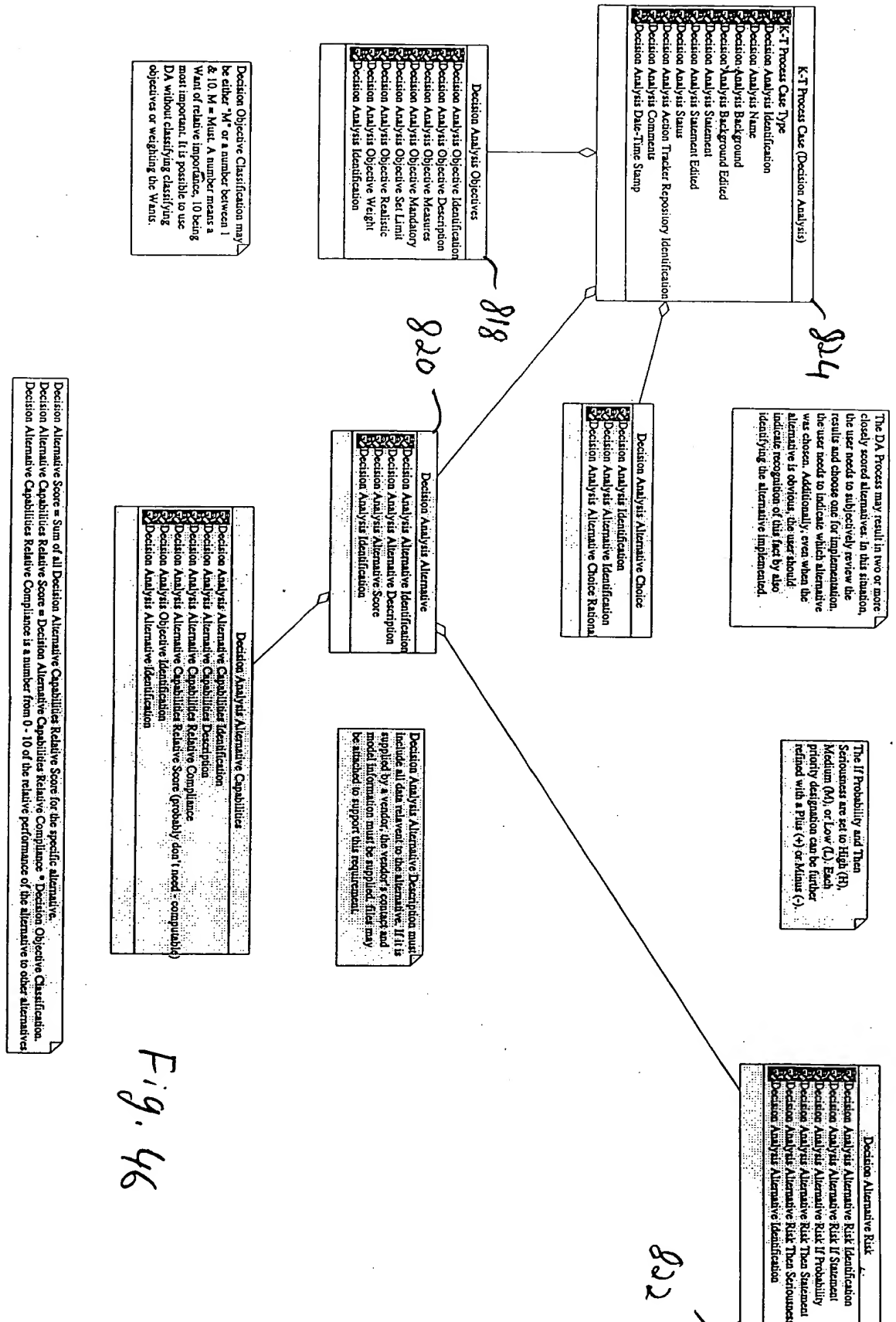
Cause of Cause Response	
Process Type	
Pa Id#	
Cause of Cause Response Id#	
Verified True Cause Identification	
Cause of Cause Response Text	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

Fix for Identical Response	
Process Type	
Pa Id#	
Fix for Identical Response Id#	
Verified True Cause Identification	
Fix for Identical Response Text	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

Fix Caused Problems Response	
Process Type	
Pa Id#	
Fix Caused Problems Response Id#	
Verified True Cause Identification	
Fix Caused Problems Response Text	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

Specification	
(from K-T Process)	
Process Type	
Process Id#	
Primary Key	
Foreign Key	
Item Description	
Comment	
Attached File Flag	
More Data Needed Statement	
Add Item()	
Edit Item()	
Delete Item()	

004493783-0128000



00493783-0428000

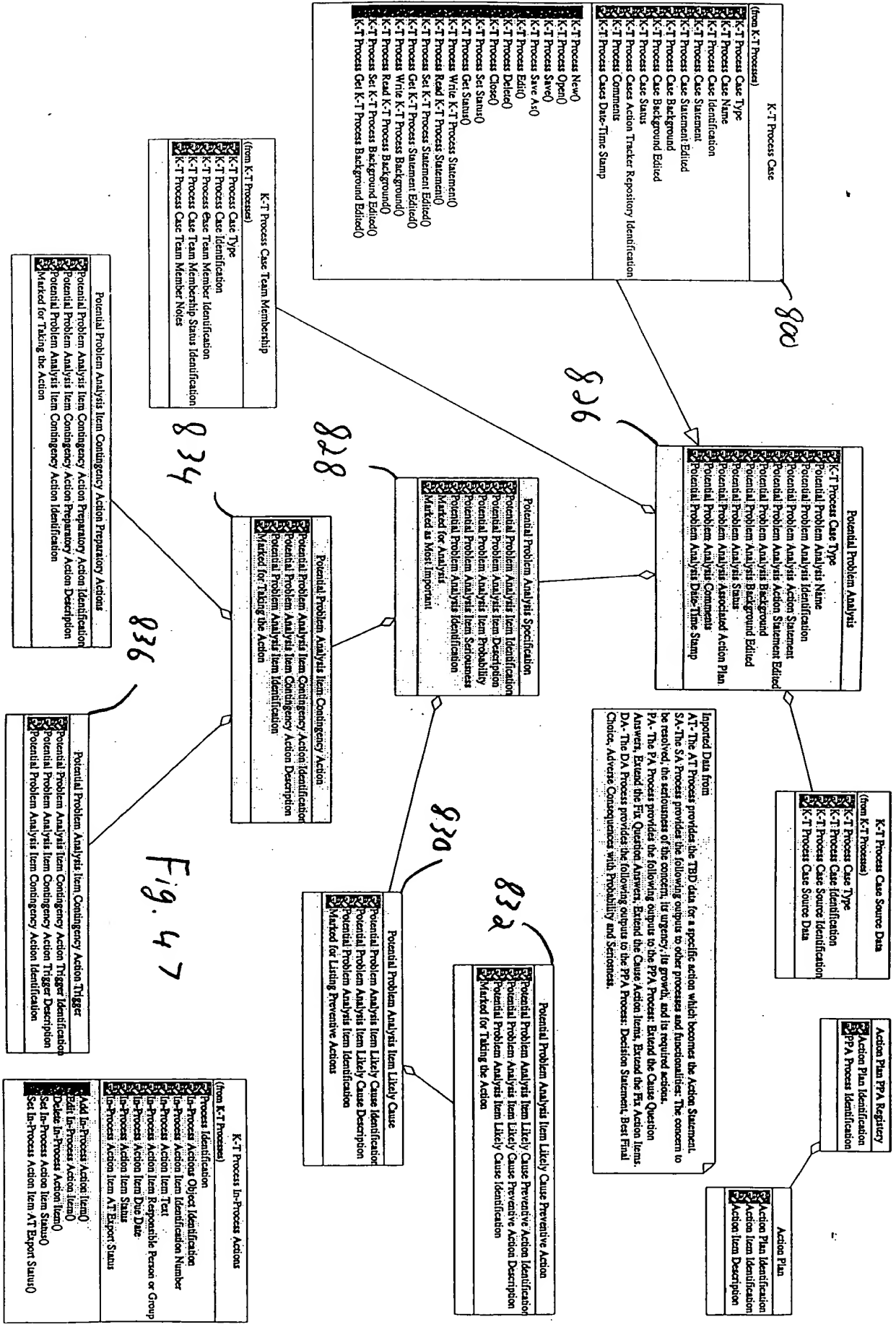
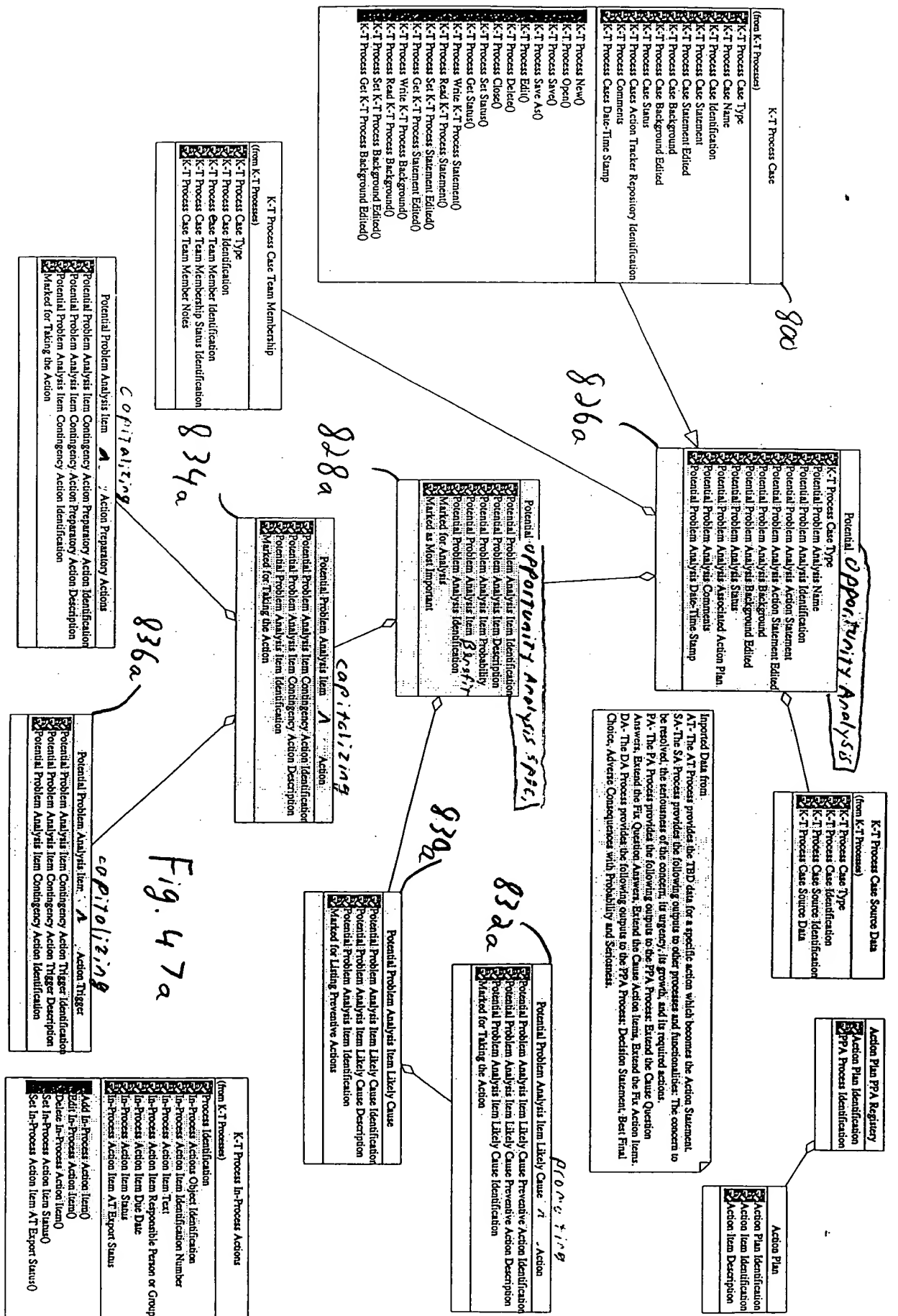


Fig. 47

094493783-012800



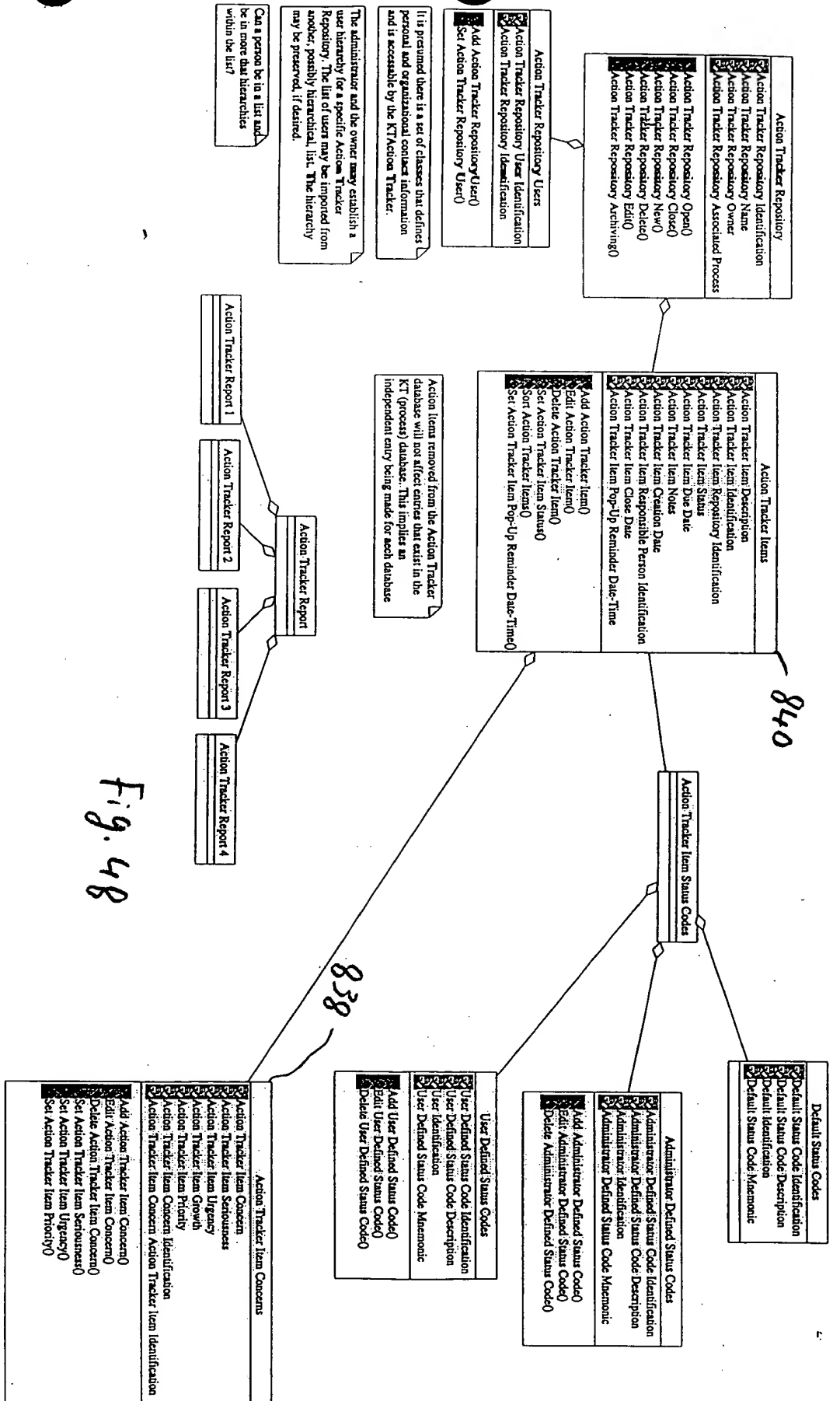
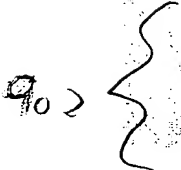
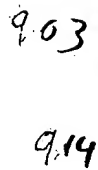


Fig. 48

004493763-012800



910  
912



F:9. 50

File View Format Support Window Mode Exit

**Potential Analysis**

opportunity Assess Benefits

Action Statement

900

903

904 Action 906 Action Plan Notes 908 Who 910 When

914

916

922 Priority 918 Potential opp. 920 Probability Benefit

High, Medium, Low	Potential opp.	High, Medium, Low	High, Medium, Low
High, Medium, Low		High, Medium, Low	High, Medium, Low
High, Medium, Low		High, Medium, Low	High, Medium, Low
High, Medium, Low		High, Medium, Low	High, Medium, Low

Insert OPP.

924

OLR Demos Examples Process Expert

Fig. 51

File View Format Support Window Mode Exit

**Potential Analysis**

opportunity Consider Likely Causes

Action Statement

903

904 Action 906 Action Plan Notes 908 Who 910 When

914

922 Priority 926 Potential opp. 928 Likely Cause Probability

High, Medium, Low	Potential opp.	Likely Cause	High, Medium, Low
High, Medium, Low			High, Medium, Low
High, Medium, Low			High, Medium, Low
High, Medium, Low			High, Medium, Low

930

932

934

936

938

Insert Cause

OLR Demos Examples Process Expert

Fig. 52

File View Format Support Window Mode Exit

**Potential Analysis**

opportunity Taking Promoting Action

Action Statement

Action	Notes	Who	When

Prev  
Next

Priority Potential Promoting opp. Actions Likely Cause Promoting Action

Insert Likely Cause Insert Preventive Action

OLR Demos Examples Process Expert

4

Fig. 53

File View Format Support Window Mode Exit

**Potential Analysis**

opportunity Taking Capitalizing Actions

Action Statement

Action	Notes	Who	When

Prev  
Next

Priority Potential Capitalizing opp. Actions Capitalizing Action

Insert Contingent Action Insert Trigger

OLR Demos Examples Process Expert

3 4

939

942

940 944 F: 9. 54



Fig. 55



# ELECTRONIC TOOL™



Edit Cell Communication View Support Window

**State Possible Causes**

▼ Problem:

Describe the Problem

State the Problem

Specify the Problem

Identify Possible Causes

Use Distinctions and Changes

✓ State Possible Causes

Evaluate Possible Causes

Test Possible Causes Against Specification

**Determine the Most Probable Cause**

Confirm True Cause

Gather Facts to Verify the True Cause

Think Beyond the Fix

## SITUATION APPRAISAL

▼ PROBLEM ANALYSIS

DECISION ANALYSIS

POTENTIAL PROBLEM ANALYSIS

POTENTIAL OPPORTUNITY ANALYSIS

ACTION TRACKER

Notepad Support 1 2 3 Go to Interview Mode Previous Screen Next Screen

Fig. 56

You've chosen to conduct a Situation Appraisal. If you're concerned about a situation and are not sure what to do, this process will help you.

- Identify and prioritize specific concerns.
- Understand the actions to take to resolve them.

Before you begin the appraisal, you'll complete these steps:

- 1 Record the background of the situation.
- 2 Record the theme of the appraisal.

47/127

Notepad

Previous Screen

Next Screen

Fig. 57

094493783-012300

1 What's the background of this situation? Describe the situation and its history.

Background

Notepad

Previous Screen

Next Screen

Fig. 58

004493783-012800

Kid eThink™



2 What's the theme or rule of this Situation Appraisal? Record a brief phrase that describes this appraisal.



Theme or Title

Notepad

Previous Screen

Next Screen

Fig. 59

094492789-012800

You've recorded the situation background. Now, you'll identify your concerns about this situation by completing these steps:

- 1 Record your concerns.
- 2 Separate and clarify your concerns until they are actionable.
- 3 Review your concerns.

Fig. 60

094493783.012800





1 What are your concerns about this situation? Report a new description of each issue, threat, or opportunity you're facing.



ins


Insert New Concern

Notebook

Previous Screen

Next Screen

Fig. 61

004493783-0123000



--	--	--	--

## Insert New Concern

concern  
00170

## Previous Concern

## Next Concern

Previous Screen

## Next Screen

Fig. 62



3 Review Your Separated and Clarified concerns. Are any concerns still unclear? Do any of the concerns require more than one action to resolve them? If so, revise them now.

Concerns

Separated and Clarified Concerns


Insert New Concern

Insert New Clarified Concern

Notepad

Previous Screen

Next Screen

Fig. 63

00403783.012800

You've identified and clarified your concerns. In the next section, you'll set priority for resolving your concerns. Is the order in which the concerns need to be resolved clear?

- ☒ Yes, and I would like to set the priority now.
- ☐ No. I need to determine the Current Impact, Future Impact, and Time Frame of each concern before I can determine the priority.

Notebook

Previous Screen

Next Screen

Fig. 64

00003783-012300

—

1. Determine whether each condition is of High, Medium, or Low priority.
2. Review your priorities.

1 What's the priority for resolving each concern? Prioritize your concerns as High, Medium, or Low depending on their importance and the order in which you will resolve them.

5

ns		Priority
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>
		High <input checked="" type="checkbox"/>

Insert New Concern

Notebook

Previous Screen

Next Screen

Fig. 66

054493723-012800

etthink™



2 Review your prioritized concerns. Press the priority you set and rate/indicate which concerns you should work on first. You change the priority.

		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		High	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Insert New Concern

Notepad

Previous Screen

Next Screen

Fig. 67

00443723-012300

1. Determine the process you'll use
2. Describe how you'll resolve your concerns

Next Screen

Figure 1 consists of 12 histograms arranged horizontally, each representing a different value of  $n$  from 10 to 120. The x-axis for all histograms is labeled 'x' and ranges from 0 to 120. The y-axis is labeled 'count' and ranges from 0 to 100. The histograms show the distribution of the number of non-zero elements in the vector  $x$ . For  $n=10$ , the distribution is centered around 60. As  $n$  increases, the distribution shifts to the right, and the peak count decreases. The histograms are labeled with their respective  $n$  values: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, and 120.



15

	Process
	Situation Appraisal ▽
	Situation Appraisail ▽
	Situation Apprasail ▽
	Situation Appraisail ▽
	Situation Appraisail ▽
	Situation Appraisail ▽
	Situation Appraisail ▽

Insert New Concordance

Notepad

**Previous Screen:**

**Next Screen**

**Fig. 69**

[illegible]

2a What do you need to do to resolve the concern? Briefly describe how you plan to resolve the concern.

Process		Resolution
Situation Appraisal		
Situation Appraisal		
Situation Appraisal		
Situation Appraisal		

Insert New Concern

Record the resolution of an identified concern

Contains  
2012  
Previous Concern  
Next Concern

Notepad Previous Screen Next Screen

Fig. 70



You've determined how to resolve your concerns. Now, you'll develop a plan for resolving the concerns by completing these steps:

- 1 Record actions needed to resolve the concern and assign responsibility for the actions.
- 2 Review your plan.

Fig. 71

1 a What needs to be done to accomplish Resolution? Review the concern and record the specific actions needed to resolve the concern. For each action, record:

Items	Priority	Process	Resolution	Actions	When	Who	Role
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>					
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>					
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>					
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>					
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>					

Insert New Action

Assign actions for all other concerns

Previous Concern  
Next Concern

Notepad

Previous Screen

Next Screen

Fig. 72

004492783-0122000

2 Here is your plan to resolving your concerns. If these actions are taken on time, will your concerns be resolved? If not, revise the list.

Items	Priority	Process	Resolution	Actions		When	Who	Role
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						
	High <input checked="" type="checkbox"/>	Situation Appraisal <input checked="" type="checkbox"/>						

Insert New Action

Notepad

Previous Screen

Next Screen

Fig. 73

094493783-012800

## ELECTRONIC TOOL™

Edit Cell Communication View Support Window

## Use Distinctions and Changes

Problem: Flight attendants have red sweat

	Is	Is Not	Distinctions	Changes
What object?	Flight attendants	Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants	Demonstrate safety equipment	New life vests (early January)
	Both male and female	Only female Only male		
What Deviation?	Red sweat Perspiration with red particles	Blisters, sores Blood		
Where Geographically?	On our A300s	Other carriers using A300s Our DC-9s	Our A300 interior configuration	New counter tops (early March) New cleanser (mid March) new safety equipment (early January) new life vests (early January) No known change
	Three 727s	Other Eastern 727s	different flotation devices	
	NY-Florida (A300) NY-Chicago (727) NY-Toronto (727)	Our other A300 routes Our other 727	Flights over water	

Insert Is/Is Not Pair

Insert Distinction

Insert Change

Notepad Support ? Go to Interview Mode

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## ELECTRONIC TOOL™

Edit Cell Communication View Support Window

## Use Distinctions and Changes

Problem: Flight attendants have red sweat

In the Use Distinctions and Changes step of Problem Analysis, you will gain insight into the data you developed in Specify the Problem. Here are the steps you will follow:

- 1 Look for all possible Distinctions between the "Is" and "Is Not" in your Object data, and record those Distinctions in the appropriate cell.
- 2 Repeat step 1 for every "Is/Is Not" pair in your specification.
- 3 Reflect on your data, making sure it is complete and specific.
- 4 Look for Changes that may be associated with each Distinction about your Object, and record those Changes in the appropriate cell.
- 5 Repeat step 4 for every Distinction that you have identified.
- 6 Reflect on your data, making sure it is complete and specific.

Notepad

Support

Go to Worksheet Mode

Previous Screen

Next Screen

Fig. 75

**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**Use Distinctions and Changes**      Problem: Flight attendants have red sweat

**1** Look at the "What Object?" Is/Is not pair below. What is distinct (different odd, special or unique) about Flight attendants when compared to Pilots, Passengers

Type an answer in the Distinctions cell below.

If you find another Distinction, click the Insert Distinction button, then type the new Distinction in the new cell.

What object?	Is	Is Not	Distinctions
	Flight attendants	Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants	Demonstrate safety equipment

Insert New Distinction

**2** When you can think of no other Distinction for this "Is/Is Not" pair, click the Next Pair button to consider the next pair, then repeat step 1.

Pair 1 of 5      Previous Pair      Next Pair

Notepad      Support      Go to Worksheet Mode      Previous Screen      Next Screen



# ELECTRONIC TOOL™

Edit Cell Communication View Support Window

## Use Distinctions and Changes

Problem: Flight attendants have red sweat

3 Here are all the Distinctions you recorded. Review your data now and make any additions or corrections.

What object?	Is	Is Not	Distinctions
Flight attendants		Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants	Demonstrate safety equipment Touch lifevests Touch oxygen masks Handle sample belts
	Both male and female	Only female Only male	
What deviation?	Red sweat Perspiration with red particles	Blisters, sores Blood	
Where geographically?	On our A300s	Other carriers using A300s Our DC-9s	Our A300 interior configuration

Insert New Distinction

Notepad Support Go to Worksheet Mode Previous Screen Next Screen

**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**State Possible Causes**

Problem: Flight attendants

have red sweat

**1** How could new life vests (early January)

Cause:

Red sweat

In, around, or between:  
Flight attendants

Type your answer in the Possible Cause area below. If you find more than one Possible Cause for this Change, click the Insert Cause button, then type the new Possible Cause in the new cell.

Possible Causes

Dye rubs off on flight attendants

Allergic reaction by flight attendants

Insert New Cause

**2** When you can think of no other Possible Causes for this Change,

click the Next Change button to consider the next Change from those you listed previously.

Change  
1 of 3

Previous Change

Next Change

Notepad Support Go to Worksheet Mode

Previous Screen

Next Screen

Fig. 78



**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**Test Possible Causes Against Spec.** Problem: Flight attendants have red sweat

Select a cause to test: link from the printed letters causing allergic reactions in some attendants

	Is	Is Not	Conditions	Assumptions or Reasons
What object?	Flight attendants	Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants	only if...	the flight attendants are the only ones touching life vests
	Both male and female	Only female Only male	yes, because ...	men and women can have allergies
What Deviation?	Red sweat	Blisters, sores	no, because...	allergies cause rash & blisters, not sweat
	Perspiration with red particles	Blood	no, because...	allergies cause rash & blisters, not sweat
Where Geographically?	On our A300s	Other carriers using A300s Our DC-9s	yes, because...	only our A300s use vests with printing
	Three 727s	Other Eastern 727s	yes, because...	only those 727s use vests with printing
	NY-Florida (A300)	Our other A300	yes, because...	only these routes use

Insert Reason or Assumption

Notepad Support Go to Interview Mode Previous Screen Next Screen



**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**Test Possible Causes Against Spec.** Problem: Flight attendants have red sweat

3 If Ink from the printed letters causing allergic reactions in some attendants is the true cause of Flight attendants have red sweat

Does it explain:  
Flight attendants

But not:  
Pilots  
Passengers  
Ground Crew

Conditions

☐ yes it does, because...  
☐ no it does not, because...  
☒ it does, but only if you assume...

Assumptions or Reasons

the flight attendants are the only ones touching lifevests

Insert Assumption or Reason

4 To test this cause against the next Is/Is Not pair, click Next Pair.

Pair 2 of 4 Previous Pair Next Pair

5 If you've tested all the Is/Is Not pairs, or if you've rejected this cause, click Select Cause to test a different cause.

Select Cause

Notepad Support Go to Worksheet Mode Previous Screen Next Screen

Fig. 81

卷之五

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**Fr. 82**

**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**ACTION REVIEW**

Action Files: **Red Sweat PA**

Priority	Concern	Seriousness	Urgency	Growth	Process
Medium	Confirm true cause	Low	High	Stable	PA
Low	PA on dropping revenues	Medium	Low	Increasing	PA

Sort By **Priority**

Action	Who	When	Notes	Status
Perform chemical analysis on cleaning fluid	J. Schlick	11-18-98	Fluid product # 144	Cause Confirmed
Check paint on all new life vests.	J. Schlick	12-15-98		Completed

Sort By **When**

View **My Actions Only**

Send/Receive Action

Notepad Support

Fig. 83

**ELECTRONIC TOOL™**

Edit Cell Communication View Support Window

**Use Distinctions and Changes** Problem: Flight attendants have red sweat

1 Look at the "What Object" Is/Is Not pair below. What is distinct (different odd, special or unique) about Flight attendants when compared to Pilots, Passengers

Type an answer in the Distinctions cell below.  
If you find another Distinction, click the Insert Distinction button.  
Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants in the new cell.

What object?	Is	Is Not	Distinctions
Flight attendants (The full text and intent of this question is displayed within this mouse-over.)		Pilots, Passengers, Ground Crew, Gate Agents, Lead Flight Attendants	Demonstrate safety equipment

Insert New Distinction

2 When you can think of no other Distinction for this "Is/Is Not" pair, click the Next Pair button to consider the next pair, then repeat step 1.

Pair 1 of 5  
Previous Pair  
Next Pair

Notepad Support Go to Worksheet Mode Previous Screen Next Screen

Fig. 84

004493783-0123000

You've chosen to conduct a Problem Analysis. If you have a problem, and you don't know what's causing it, Problem Analysis will help you find the cause.

Before you begin the analysis, record the problem background by completing these steps:

- 1 Describe how the object with the problem is actually performing and how it should be performing
- 2 Write a concise Problem Statement that explains what object has the problem and what the problem is
- 3 Confirm that the cause of the problem is unknown
- 4 Describe how the problem was discovered
- 5 Record the actions to minimize the problem and any attempts to solve it.
- 6 Review the problem background

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Fig. 85

0044037832-012800



1a How is the person process of thing with the problem actually performing?



1b How should the person process of thing with the problem be performing?



Should:

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Fig. 86

09493783-012800



Refer to your Should and Actual information to answer the following questions:

Should:  
Actual:

2. What equipment, system, product, process, or person has the problem? Briefly describe the object that has the problem.

Object:

2b. What's the difference between what should be happening and what's actually happening? Briefly describe the deviation the object is experiencing.

Deviation:

Your Problem Statement describes the object and the deviation. If necessary, edit the statement so that it can be easily understood by anyone in your organization.

Problem Statement

Notepad

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Fig. 87

3 Do you know what's causing it?

☐ No. I'm not certain. Continue the PA

☐ Yes, but I need to choose a way to fix it.

☐ Yes, but I need to make a plan for fixing it.

☐ Yes, but I can't fix it until I find out what's causing the cause.

☐ Yes, but I want to continue this PA anyway.

Notepad

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4. How was the problem discovered? Record any information you know about how the problem was discovered and who discovered it.



How was the problem discovered:

[A large rectangular area for text input, currently blank and heavily shadowed.]

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Fig. 89

004493783-012800



**RES**

Date \_\_\_\_\_

[illegible]

10. *Chlorophyll a* (Chl *a*) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl *a* is located in the thylakoid membranes of chloroplasts and is essential for the light-dependent reactions of photosynthesis.



Hauls	A. (%)	B. (%)	C. (%)
1	10	5	2
2	30	15	5
3	55	35	8
4	75	55	10
5	85	65	12
6	90	70	15
7	92	75	18
8	95	78	20
9	98	80	22
10	100	82	25

**NextScreen**

Fig. 90

**If so, edit the problem's background information. Here:**

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DOI: 10.1177/08862605211019111  
jiv.sagepub.com

Run	Time	Temperature	Pressure	Flow Rate	Concentration	Yield	Quality
1	10.0	100.0	1.0	1.0	1.0	1.0	1.0
2	10.0	100.0	1.0	1.0	1.0	1.0	1.0
3	10.0	100.0	1.0	1.0	1.0	1.0	1.0
4	10.0	100.0	1.0	1.0	1.0	1.0	1.0
5	10.0	100.0	1.0	1.0	1.0	1.0	1.0
6	10.0	100.0	1.0	1.0	1.0	1.0	1.0
7	10.0	100.0	1.0	1.0	1.0	1.0	1.0
8	10.0	100.0	1.0	1.0	1.0	1.0	1.0
9	10.0	100.0	1.0	1.0	1.0	1.0	1.0
10	10.0	100.0	1.0	1.0	1.0	1.0	1.0
11	10.0	100.0	1.0	1.0	1.0	1.0	1.0
12	10.0	100.0	1.0	1.0	1.0	1.0	1.0
13	10.0	100.0	1.0	1.0	1.0	1.0	1.0
14	10.0	100.0	1.0	1.0	1.0	1.0	1.0
15	10.0	100.0	1.0	1.0	1.0	1.0	1.0
16	10.0	100.0	1.0	1.0	1.0	1.0	1.0
17	10.0	100.0	1.0	1.0	1.0	1.0	1.0
18	10.0	100.0	1.0	1.0	1.0	1.0	1.0
19	10.0	100.0	1.0	1.0	1.0	1.0	1.0
20	10.0	100.0	1.0	1.0	1.0	1.0	1.0
21	10.0	100.0	1.0	1.0	1.0	1.0	1.0
22	10.0	100.0	1.0	1.0	1.0	1.0	1.0
23	10.0	100.0	1.0	1.0	1.0	1.0	1.0
24	10.0	100.0	1.0	1.0	1.0	1.0	1.0
25	10.0	100.0	1.0	1.0	1.0	1.0	1.0
26	10.0	100.0	1.0	1.0	1.0	1.0	1.0
27	10.0	100.0	1.0	1.0	1.0	1.0	1.0
28	10.0	100.0	1.0	1.0	1.0	1.0	1.0
29	10.0	100.0	1.0	1.0	1.0	1.0	1.0
30	10.0	100.0	1.0	1.0	1.0	1.0	1.0
31	10.0	100.0	1.0	1.0	1.0	1.0	1.0
32	10.0	100.0	1.0	1.0	1.0	1.0	1.0
33	10.0	100.0	1.0	1.0	1.0	1.0	1.0
34	10.0	100.0	1.0	1.0	1.0	1.0	1.0
35	10.0	100.0	1.0	1.0	1.0	1.0	1.0
36	10.0	100.0	1.0	1.0	1.0	1.0	1.0
37	10.0	100.0	1.0	1.0	1.0	1.0	1.0
38	10.0	100.0	1.0	1.0	1.0	1.0	1.0
39	10.0	100.0	1.0	1.0	1.0	1.0	1.0
40	10.0	100.0	1.0	1.0	1.0	1.0	1.0
41	10.0	100.0	1.0	1.0	1.0	1.0	1.0
42	10.0	100.0	1.0	1.0	1.0	1.0	1.0
43	10.0	100.0	1.0	1.0	1.0	1.0	1.0
44	10.0	100.0	1.0	1.0	1.0	1.0	1.0
45	10.0	100.0	1.0	1.0	1.0	1.0	1.0
46	10.0	100.0	1.0	1.0	1.0	1.0	1.0
47	10.0	100.0	1.0	1.0	1.0	1.0	1.0
48	10.0	100.0	1.0	1.0	1.0	1.0	1.0
49	10.0	100.0	1.0	1.0	1.0	1.0	1.0
50	10.0	100.0	1.0	1.0	1.		

1. The first step in the process of developing a new product is to identify a market need. This involves conducting market research to determine what consumers want and need. Once a market need is identified, the next step is to develop a concept for a product that meets this need. This concept should be based on the market research and should be feasible, desirable, and profitable. The third step is to develop a business plan for the product. This plan should outline the marketing strategy, the production process, and the financial projections. The fourth step is to secure financing for the product. This can be done through a variety of sources, including banks, venture capitalists, and angel investors. The fifth and final step is to launch the product and monitor its performance. This involves tracking sales, customer feedback, and other key performance indicators to ensure that the product is meeting its goals and that the business is profitable.

[illegible]

Next Screen

In order to find the cause of the problem you'll need to describe four aspects of it: What, Where, When, and Extent. First you'll describe what the problem is by following these steps:

1. Record what specific object has the deviation.
2. Record what similar objects could have the problem, but do not.
3. Record the specific deviation.
4. Record what similar deviations the object could have, but does not.
5. Review your what data, making sure it's complete and specific.

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Fig. 92

054493783-012800

KT et al.	
<p>1 What specific person, system, or thing is expanding the deviation? Is your problem statement you described the object as "if possible, devise your observation to make it more specific and complete."</p>	
What object?	Is
<p>Insert News</p>	
<p>Notepad</p>	
<p>Previous Screen</p>	
<p>Next Screen</p>	

Fig. 93

09493783-012800

2 What person's system, or thing could also have, but does not? In the Is Not cell, its objects must be similar to but are not experiencing the deviation

What object?		Is	Is Not

Insert New Is/Is Not Pair

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Fig. 94

00003782-012800

84/127



3. What exact is the deviation? In your problem statement, you described the deviation as "if possible, reverse birth description to make it more accurate and complete".



What deviation?

s

Notepad

Previous Screen | Next Screen

Insert New IS

Fig. 95

4. What other deviations could reasonably be expected in the Is Not cell, record conditions similar to that you might expect to see. Head, tail, aster, small, or measure on the object, but do not



What deviation?

Is

Is Not

Insert New Is/Is Not Pair

Notepad

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Fig. 96

004493783-012800

86/127

5 Review your What data? Can you make it more specific? Do you need to add more? If so, revise your data now.

	Is	Is Not
What object?		
What deviation?		

Insert New | s/s Not Pair

Notepad

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Next Screen

Fig. 97

00403783-012000

You've described what the problem is. Now, you'll describe where the problem is located by completing these steps:

1. Record the physical location where the object is observed when it has the deviation.
2. Record other physical locations where the object has been when it did not have the deviation.
3. Record where the deviation is on the object.
4. Record locations on the object where the deviation could be, but is not.
5. Review your where data making sure it's complete and specific.

2/1/88

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Fig. 98

00003783.012800

1. Where is when it has? Record the specific physical locations where the object is located when it has the operation.



Where geographically?

is

Insert News

Notepad

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Fig. 99

09493783-012800

89/127



2. Where besides could have been located? Record the places or identical objects have been or could have been located. If they did not have the deviation.

Where geographically?	Is		Is Not

Insert New Is/Is Not Pair

Fig. 100

09493733-012300

90/127

3 Where is location? Record all the places on the object where the deviation can be seen, smelled, felt, heard, tasted, or measured.



Where on the object?

Is

Insert New/Is

Notepad

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Next Screen

Fig. 101

09493783-012300



4. Where besides could be located on the ? Record places on the object where you could reasonably expect to see the deviation but do not



Where on the object?

Is

Is Not

Insert New s/s Not Pair

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Next Screen

Fig. 102

00493783-012800

92/127



5 Review your Where information. Can you make your data more specific? Do you need to add any data? If so, revise your data now.

	Is	Is Not
Where geographically?		
Where on the object?		

Notepad

Previous Screen

Next Screen

Insert NEW IS/IS NOT Pair

Fig. 103

004493783-012800

You just described the location of the object. Now, describe when the problem occurred by following these steps:

- 1 Record when the problem was first noticed.
- 2 Record the times when the problem could have been noticed first, but was not.
- 3 Record the times the problem has occurred since the first time it happened.
- 4 Record the times after the first occur since when the problem could have happened, but did not.
- 5 Record the event in the object's life cycle that was happening when the problem first occurred.
- 6 Record the events in the object's life cycle that could have been happening when the problem first occurred.
- 7 Review your When data.

Notepad

Previous Screen | Next Screen

Fig. 104

09493783-012800

1 When did you first notice it? Record the time and date the deviation first occurred

When first?

5

Insert New Is

Notepad

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Next Screen

Fig. 105

09493783-012800



2. What times before or after could you have first noticed this? Record other dates and times when the problem could have happened (if it is).



When first?

Is

Is Not

Insert News/ISI/No Pair

Notepad

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Next Screen

Fig. 106

09493783-012300

96/127

3a When since has happened? Record the dates and times the deviation occurred after the first time it was noticed

When since?

is

3b How often does it happen? Determine whether the deviation happens continuously, periodically, or sporadically. Select the pattern from the list

When pattern?

is

Continuously

Note pad

Previous Screen Next Screen

Fig. 107

00403783-012800



4b. When since could have occurred, but it didn't? Record the dates and times after when you might have expected to see the problem, but didn't.

?

When since?

Is

Is Not

98/127

You said the deviation is occurring in a pattern. Based on this information, the system has selected the patterns that do not describe how often the occurs. If necessary, revise the data.

Pattern?

Patterns

Continuously

☒

Is Not

Notepad

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Fig. 108

00003783-012800

5. What was happening to when was first observed? Describe the event, stage, operation, or speed in the object's life cycle that was happening when you first noticed the deviation.



When in the life cycle?

Is



Insert News

Notepad

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Fig. 109

09493783-042800



6 What could have been happening to when was first observed? Describe the events, stages, functions, or speeds of the objects the eye is observing which you might have expected to first notice the deviation but didn't.

Is

Is Not

When in the life cycle?

--	--	--

100/127

Notepad

Insert New Wis

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Fig. 110

00403783.012800



7. Review your information. Can you make your data more specific? Do you need to add any data? If so, revise it on.

	Is	Is Not
When first?		
When since?		
What pattern?		
When in the life cycle?		

Insert New/Is/Is Not Pair

Notepad

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Next Screen

Fig. 111

004493783 012800

You described when the problem occurred. Now, you'll describe the extent of the problem by completing these steps:

- 1 Record the number of objects that have the deviation
- 2 Record the number of objects that could have the deviation, but do not
- 3 Record the size of the deviation
- 4 Record what the size of the deviation could be, but is not
- 5 Record how many deviations are on a single object
- 6 Record how many deviations could be on a single object, but are not
- 7 Review your Extent data

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Fig. 112

00103723-0122000

1a. How many have? Record the total number, the percentage, or both.

How many objects?

is

1b. Is the number of with increasing/decreasing, or staying the same? Select the one that best describes the trend.

is

Is the trend in number of objects?

Increasing

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Fig. 113

00003783-012800



51





3a What is the size of a single? Record the size or range of sizes

What size?

is

Insert New/Is

3b Is the size of the increasing, decreasing, or staying the same? Select the one that best describes the trend.

is

What is the trend in the size?

Increasing

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Fig. 115

094493783.012800

4a. What other sizes could the belt be? Is not? Record the sizes or range of sizes more or less than

What size?

Is

Is Not

4b. You said the size of the is. Based on this information, the system selected trends that do not describe the change in the size of the deviation. If necessary, revise the data.

the trend in the size?

Is

Increasing

Is Not

Decreasing

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Fig. 116

00003783-012800

5a: How many are on path? Record the number of range

How many deviations?

is

Insert New is

5b: Is the number of deviations on each object increasing, decreasing, or staying the same? Select the one that best describes the trend

Is the trend in deviations?

is

Increasing

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Fig. 117

00403783-012800



6a What would be the total number of on each, but is not? Record the number of deviations more or less than that you could see, but don't.

How many deviations?

Is

Is Not

6b You will be the number of per is. Based on this information, the system selected trends that do not describe the change in the number of deviations on each object. If necessary, revise the data.

What is the trend in deviations?

Is

Is Not

Increasing

☒

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Fig. 118

09493783-012800

7 Review your Extensible. Can you make your data more specific? Does any data need to be added? If so, review it here.

	Is	Is Not
When in the life cycle?		
How many objects?		
What is the trend in number of objects?		
What size?		
What is the trend in the size?		
How many deviations?		

Insert New WIS Not Pair

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Fig. 119

09493763-012800

Review your Problem Specification. Does it accurately describe what you know about the problem?  
Does anything need to be added or changed? If so, revise your definition.

	Is	Is Not
What object?		
What deviation?		
Where geographically?		
Where on the object?		
When first?		
When since?		
When often?		

Insert New | Is | Is Not | Edit

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Fig. 120

00003783-012800

You've described what the problem is, when and where it occurred, and the extent. Now, you'll identify possible causes of your problem by completing these steps.

Describe whether you want to develop causes using knowledge and experience or distinctions and changes.

If you decide to use knowledge and experience:

Generate possible causes using your knowledge of the problem and experience with similar problems.

Record whether size of the deviation could be, but is not.

If you decide to use distinctions and changes:

Describe what is distinct about your "is" data when

Record how many deviations are on a single

Record how many deviations could be on

Review your Extent data

Review your Extent data

Review your Extent data

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Fig. 121

09493783-012800



1. Which method would you like to use to identify possible causes of this problem?



☐ Use your knowledge of the problem and experience with past problems. Use this method if you have some ideas about what caused the problem.

☐ Look for conditions and changes in the "Is" and "Is Not" data. Use this method if

☐ You can think of any causes.

☐ You have many causes and need help determining the most likely cause.

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Fig. 122

09493783-012200

2a. What is different, odd, special, or unique about what compared to P. Record as many distinctions as you can think of. If you can't find a distinction, leave the cell blank.

What deviation?	Is	Is Not	Distinctions

Insert New S/S Not Pair

Insert New Distinction

2b. What are distinctions in and/or IS/IS Not pair?

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Fig. 123

00493782-012800

3a What has changed in or changed or about? Record each change and the date it occurred

deviation?	Is	Is Not	Distinctions	Changes

Insert New Is Not Pair

Insert New Distinction

Insert New Change

3b Look for changes in speech or distinction

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Fig. 124

09493783-012800



4a. How would have caused or tried. About how many change could have possibly caused the deviation.  
Record all the possible causes you can think of.

Causes

Insert New Possible Cause

4b. Look for causes in effect change

You think you've identified the cause cause of the problem. Click here to test possible causes.  
The mouse click N/A Screen

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Fig. 125



**Insert New Cause**

6a. How could your changes in combination have caused ? Review every combination of changes. For each combination, record all the possible causes you can think of.



Changes

--	--

Possible Causes

--

Insert New Cause

6. You think you've identified the true cause of the problem. Click here to test possible causes. Otherwise click Next Screen

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Fig. 127

09493783-012800

7a How could cause? Record all the possible causes you can think of.



7b Look for causes in another direction.

Insert New Possible Cause

7c Look for causes in another direction.

Have you tried elimination and change in combination have caused? Review every combination of changes and record all the possible causes you can think of.

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Fig. 128

00443783-012800





## Insert New Possible Cause

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[illegible]

2. Review your possible causes. Can you think of any more causes? If so, add more now. Are there any pauses in your data that you need to consider? If so, add them from the analysis.

	Is	Is Not
What subject?		
What deviation?		
Where geographically?		
Where on the object?		
When first?		
When since?		
When again?		

Possible Causes

Insert New (Is/Is Not Pair)

Insert New Possible Cause

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Fig. 130

09403783-042800



How could your observation and change in observation have caused? Review every combination of changes and record all the possible causes you can think of.

	Is	Is Not
What object?		
What deviation?		
Where geographically?		
Where on the object?		
When first?		
When since?		
What pattern?		

Possible Causes

Insert New/Is Not Pair

Insert New/Possible Cause

Delete Possible Cause

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Fig. 131

00403282-012800

You described when the problem occurred. Now, you'll describe the extent of the problem by completing these steps:

1. Test possible causes against the Problem Specification and record any notes or assumptions.
2. Review your assumptions.
3. Identify the most probable cause.

Fig. 132

09493783-012800

10. Which cause would you like to test? Select one from the list.

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Fig. 133

00493783-012800

If is the cause of does explain but not

Options

a Yes it does because

c No it does not because

c It does but only you assume

Explanations

124/127

Insert New Explanation

Yes the cause explains whether it is Not just

Select a new cause in test

Not available

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Next Screen

Pos  
auses

Explanations

Review your assumptions. Are there any other assumptions that you should include? If so, add more.  
In addition, review your explanations for "Yes" and "No" to make sure they are accurate.

Insert New Explanation

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Fig. 135

094493783-012300



3. Which possible cause best explains the detail in your problem specification? Select the one you think is the most probable cause of the problem.

Most Probable Cause	Possible Causes	Explanations
<input type="radio"/>		
<input type="radio"/>		
<input type="radio"/>		
<input type="radio"/>		
<input type="radio"/>		

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Fig. 136

09493783-012800



You identified the most probable cause of the problem. Now, verify that it's the true cause of the problem by following these steps:

1. Record actions needed to verify the true cause.
2. Once the cause has been verified, record the true cause.
3. Examine the cause to see if it has additional ramifications for your object or other objects.
4. Describe how you intend to fix the problem.
5. Examine the fix to find out what other impacts it may have.
6. Assign actions.

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Fig. 137

09493782-012800